

CLAIMS

What is claimed is:

1. An electronic payment system comprising:

5 at least two of an electronic check module, and identity verification module, and a debit data validation module,

the electronic check module having

a consumer terminal configured to accept transactional debit data, the transactional debit data including order data, consumer data, and check data; and

10 an authorization computer adapted to be coupled to the consumer terminal via a network and configured to

receive the transactional debit data, and

generate a response message indicative of one of a first

15 condition and a second condition, wherein the first condition is an acceptance of the electronic check payment, and further wherein the second condition is a declination of the electronic check payment;

the identification verification module having a fraud indicator search module and a consumer identity validation search module, the identity verification module

20 configured to

receive a request to verify the identity of a consumer involved in a debit transaction,

receive at least one consumer identification debit data element, generate an identity verification score, compare the identity verification score against 25 a threshold value, and

generate a response message to the request to verify the identity of a consumer involved in a debit transaction, wherein the response message is indicative of one of a first condition and a second condition, wherein the first condition is a verification of the identity of the consumer, and further wherein the second condition is a invalidation of the identity of the consumer; and

30 the debit data validation module having

- a calling application configured to
receive a request to validate debit data, and
receive transactional debit data that is to be validated;
- a debit data search engine including a keying module and a matching
module, the debit data search engine configured to
receive the transactional debit data from the calling application,
and
process the transactional debit data; and
a debit data warehouse including stored debit data, wherein the stored
debit data is representative of at least one consumer, and further wherein at least one
consumer key links the stored debit data representative of each of the at least one
consumer.
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2. An electronic check payment system for a network, the system comprising:
15 a consumer terminal configured to accept transactional debit data, the
transactional debit data including order data, consumer data, and check data; and
an authorization computer adapted to be coupled to the consumer terminal via
the network and configured to
receive the transactional debit data, and
20 generate a response message indicative of one of a first condition and a
second condition, wherein the first condition is an acceptance of the electronic check
payment, and the second condition is a declination of the electronic check payment.
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3. A system as claimed in claim 2, wherein the authorization computer is further
configured to generate an automated clearinghouse message when the response
message is indicative of the first condition.
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4. A system as claimed in claim 3, further comprising an automated
clearinghouse computer adapted to be coupled to the authorization computer via the
network and configured to
receive the automated clearinghouse message,
generate a merchant bank message, wherein the merchant bank message

includes information regarding an amount of money to be deposited into a bank account of a merchant, and

5 generate a consumer bank message, wherein the consumer bank message includes information regarding an amount of money to be collected from a bank account of a consumer.

5. A system as claimed in claim 4, wherein the automated clearinghouse computer is further configured to regenerate the consumer bank message at least one time.

10 6. A system as claimed in claim 2, further comprising a merchant computer, wherein the authorization computer is further adapted to be coupled to the merchant computer via the network, and further wherein the merchant computer is configured to accept additional transactional debit data including payee data.

15 7. A system as claimed in claim 6, wherein the merchant computer is adapted to be coupled to the consumer terminal via the network, and further wherein the merchant computer is configured to receive the transactional debit data.

20 8. A system as claimed in claim 6, wherein the authorization computer is further configured to receive the additional transactional debit data, and wherein the transactional debit data that the authorization computer is configured to receive includes the transactional debit data the consumer terminal is configured to accept and the additional transactional debit data the merchant computer is configured to accept.

25 9. A system as claimed in claim 2, wherein the order data includes at least one of a name of a product to be purchased, a name of a service to be purchased, a price per unit of a product to be purchased, a price per unit of a service to be purchased, a quantity of a product to be purchased, and a quantity of a service to be purchased.

30 10. A system as claimed in claim 2, wherein the consumer data includes at least one consumer data element representative of a consumer including a name, a

residential address, a billing address, an email address, a phone number, a date of birth, a driver's license number, and a driver's license state.

11. A system as claimed in claim 2, wherein the check data includes MICR data
5 representative of MICR data printed on a paper check.

12. A system as claimed in claim 11, wherein the MICR data includes at least one
of a routing and transit number and a checking account number.

10 13. A system as claimed in claim 2, wherein the consumer terminal is further
configured to display a merchant web site posted the merchant computer, and to
accept at least some of the transactional debit data the consumer terminal is
configured to accept using a checkout page of the merchant web site.

15 14. A system as claimed in claim 13, wherein the consumer terminal is further
configured to display at least one data capture page of the merchant web site after a
request to make payment using an electronic check payment is accepted, and wherein
at least some of the at least some transactional debit data the consumer terminal is
configured to accept using the checkout page is automatically displayed in at least one
data field of the at least one data capture page.

25 15. A system as claimed in claim 14, wherein the at least one data capture page
includes an electronic facsimile of a paper check, and the consumer terminal is further
configured to accept the check data using the electronic facsimile portion of the at
least one data capture page.

16. A system as claimed in claim 15, wherein the electronic facsimile of a paper
check includes two data fields, the consumer terminal is configured to accept the
check data using the two data fields, and the two data fields are located in the same
30 area as the check data appears on the paper check.

17. A system as claimed in claim 2, wherein the consumer terminal is configured to accept a request to make payment using an electronic check payment, and the authorization computer is further configured to receive the request to make payment using an electronic check payment.

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18. A system as claimed in claim 17, wherein the request to make payment using an electronic payment includes a request to make deferred payments using at least two electronic payments.

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19. A system as claimed in claim 17, wherein the request to make payment using an electronic payment includes a request to make recurring payments using at least two electronic payments.

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20. A system as claimed in claim 2, wherein the authorization computer includes a pass-through application running on the primary server, a converter and router coupled to the second firewall, wherein the converter and router performs integrated data capture and convert operations, a rules and formatter application executed on the converter and router, and an electronic check module.

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21. A system as claimed in claim 20, wherein the authorization computer further includes

a tracking server coupled to the converter and router, and
an application server coupled to the converter and router, wherein the

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electronic check module runs on the application server.

22. A system as claimed in claim 21, wherein the authorization computer further includes

30 a transaction adapter module running on the application server, wherein the transaction adapter module generates an authorization/funding request in one of an ISO 100 and an ISO 200 format; and

a transaction switch module on a settlement server configured to receive the authorization/funding request from the transaction adapter module.

23. A system as claimed in claim 22, wherein the authorization computer further
5 includes a SCAN server, configured to receive the authorization/funding request from
the transaction switch module.

24. A system as claimed in claim 23, wherein the SCAN server includes a SCAN
online module, a SCAN reporter, and a SCAN host.

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25. A system as claimed in claim 20, wherein the authorization computer further
includes

a first firewall,

a primary server coupled to the first firewall,

15 a failover server coupled to the first firewall, and

a second firewall coupled to the primary server and the failover server.

26. A system as claimed in claim 2, wherein the authorization computer is
configured to generate at least one of an authorization request, a funding request, and
20 an authorization and funding request.

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27. A system as claimed in claim 26, wherein a SCAN server adapted to be
coupled to the authorization computer via the network is configured to

receive the at least one of the authorization request, the funding request, and

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the authorization and funding request, and

generate a SCAN response message indicative of one of a first condition and a
second condition, wherein the first condition is acceptance of the at least one of the
authorization request, the funding request, and the authorization and funding request,
and further wherein the second condition is a declination of the at least one of the
30 authorization request, the funding request, and the authorization and funding request.

28. A system as claimed in claim 27, wherein the SCAN server is further configured to automatically decline at least one of the at least one of the authorization request, the funding request, and the authorization and funding request.

5 29. A system as claimed in claim 27, wherein the SCAN server is further configured to automatically accept at least one of the at least one of the authorization request, the funding request, and the authorization and funding request.

10 30. A system as claimed in claim 27, wherein the SCAN server is further configured to utilize at least one filter to process the at least one of the authorization request, the funding request, and the authorization and funding request, wherein the filter includes a do not exceed amount.

15 31. A system as claimed in claim 27, wherein the SCAN response message is utilized by the authorization computer to generate the response message.

32. A method of conducting an electronic check payment transaction, the method comprising:

receiving via a merchant computer transactional debit data entered by a consumer on a merchant web site;

5 receiving check data entered by a consumer, wherein the check data is representative of data on a paper check;

receiving additional transactional debit data entered by a merchant;

processing the transactional debit data and the additional transactional debit data;

10 generating a response message indicative of one of a first condition and a second condition, wherein the first condition is an acceptance of the electronic check payment, and further wherein the second condition is a declination of the electronic check payment.

15 33. An identity verification system for verifying the identity of a consumer involved in a debit transaction, the system comprising:

an identity verification module including a fraud indicator search module and a consumer identity validation search module, wherein the identity verification module is configured to

20 receive a request to verify the identity of a consumer involved in a debit transaction,

receive at least one consumer identification debit data element,

generate an identity verification score,

compare the identity verification score against a threshold value, and

25 generate a response message to the request to verify the identity of a consumer involved in a debit transaction, wherein the response message is indicative of one of a first condition and a second condition, wherein the first condition is a verification of the identity of the consumer, and further wherein the second condition is a contradiction of the identity of the consumer.

30 34. A system as claimed in claim 33, wherein each of the at least one consumer identification debit data element is one of a name, a current address, a previous

address, a date of birth, a home phone number, a work phone number, a driver's license number, an MICR number, and a SSN.

35. A system as claimed in claim 33, wherein the fraud indicator search module is
5 configured to perform fraud indicator searches.

36. A system as claimed in claim 35, wherein the fraud indicator searches include validation procedures on at least one of a phone number, a phone number to a zip code, a date of birth to a SSN date of issuance, and an address to a warm address.

10 37. A system as claimed in claim 35, wherein the fraud indicator search module is further configured to generate a fraud indicator output for each fraud indicator search performed.

15 38. A system as claimed in claim 37, wherein the fraud indicator output is utilized to generate the identity verification score.

39. A system as claimed in claim 33, wherein the consumer identity validation search module is configured to perform consumer identity validation searches.

20 40. A system as claimed in claim 39, wherein the consumer identity validation searches include validation procedures on at least one of a driver's license number and an issuing state of the driver's license number, a SSN, an individual taxpayer identification number, a driver's license date of birth to a SSN date of issuance, a date of birth to a driver's license date of birth, a name, a name to a driver's license number, a name to a consumer address, a name to a SSN, a name to an MICR, an address to a zip code, a name and an address, a name and a driver's license number, a name and a SSN, a name and a phone number, a name and an MICR, a name and an address and a date of birth, an MICR and phone, an MICR and an address, and a name and an address and a phone.

41. A system as claimed in claim 39, wherein the consumer identity validation search module is further configured to generate a consumer identity validation output for each consumer identity validation search performed.

5 42. A system as claimed in claim 41, wherein the consumer identity validation output is utilized to generate the identity verification score.

10 43. A system as claimed in claim 33, wherein the threshold value is one of an aggressive threshold level, a median threshold level, and a conservative threshold level.

44. A system as claimed in claim 33, wherein the identity verification module is further configured to auto-accept a debit transaction.

15 45. A system as claimed in claim 33, wherein the identity verification module is further configured to auto-decline a debit transaction.

20 46. A system as claimed in claim 33, wherein the identity verification module is further configured to weight at least one of a fraud indicator output and a consumer identity validation output to generate the identity verification score.

47. A method of verifying the identity of a consumer involved in a debit transaction, the method comprising:

25 receiving a request to verify the identity of a consumer involved in a debit transaction;

receiving at least one consumer identification debit data element;

generating an identity verification score;

comparing the identity verification score against a threshold value; and

30 generating a response message to the request to verify the identity of a consumer involved in a debit transaction, wherein the response message is indicative of one of a first condition and a second condition, wherein the first condition is a

verification of the identity of the consumer, and further wherein the second condition is a contradiction of the identity of the consumer.

48. A debit data validation system for a network, the system comprising:

5 a calling application configured to

receive a request to validate debit data, and

receive transactional debit data that is to be validated;

a debit data search engine including a keying module and a matching module, wherein the debit data search engine is configured to

10 receive the transactional debit data from the calling application, and process the transactional debit data; and

15 a debit data warehouse including stored debit data, wherein the stored debit data is representative of at least one consumer, and further wherein at least one consumer key links the stored debit data representative of each of the at least one consumer.

49. A system as claimed in claim 48, wherein the keying module performs a keying process, and further wherein the keying process includes a standardization component, a validation component, and a matching component.

20 50. A system as claimed in claim 49, wherein a converter is adapted to be coupled to at least one of the debit data search engine and the debit data warehouse, further wherein the converter is coupled to at least one data source, and further wherein the at least one data source includes raw debit data representative of the at least one consumer.

25 51. A system as claimed in claim 50, wherein the converter performs parsing of the raw debit data, wherein parsing includes breaking a single data field into a number of representative data fields.

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52. A system as claimed in claim 50, wherein the converter performs bursting of the raw debit data, wherein bursting includes separating a joint account name into at least two representative names.
- 5 53. A system as claimed in claim 50, wherein the converter includes a geographic coder adapted to correct at least one of a street name, a city, a state, a zip code,
- 10 54. A system as claimed in claim 50, wherein the raw debit data includes data from at least one of a checking account opening, a checking account closing, a savings account opening, a savings account closing, a checking account collection, an overdraft, a check order, a returned check transaction, a check printing order, an account inquiry, a retail transaction, an ATM transaction, an automated clearinghouse transaction, and an Internet transaction.
- 15 55. A system as claimed in claim 50, wherein the raw debit data includes attributes associated with the at least one consumer, and further wherein the attributes include at least one of a name, an address, a SSN, a driver's license number, a driver's license state, a bank account number, a home phone number, a work phone number, and an MICR.
- 20 56. A system as claimed in claim 55, wherein the raw debit data from the at least one data source is utilized only if it includes at least two of the attributes.
- 25 57. A system as claimed in claim 49, wherein the standardization component standardizes the raw debit data into a consistent format.
- 30 58. A system as claimed in claim 49, wherein the validation component checks the raw debit data against existing reference files to detect at least one of bad data and incorrect data.
59. A system as claimed in claim 49, wherein the matching component matches the raw debit data against the stored debit data to determine one of a first condition

and a second condition, wherein the first condition is a match between the raw debit data and the stored debit data, and further wherein the second condition is no match between the raw debit data and the stored debit data.

5 60. A system as claimed in claim 59, wherein the raw debit data is linked to the stored debit data and thereby becomes stored debit data when the first condition is determined.

10 61. A system as claimed in claim 59, wherein the stored debit data and the raw debit data are representative of the same at least one consumer when the first condition is determined.

15 62. A system as claimed in claim 59, wherein the raw debit data is stored in the debit data warehouse and is not linked to the stored debit data and thereby becomes stored debit data not linked to existing stored debit data when the second condition is determined.

20 63. A system as claimed in claim 59, wherein the stored debit data and the raw debit data are not representative of the same at least one consumer when the second condition is determined.

25 64. A system as claimed in claim 48, wherein the at least one consumer key is thirteen bytes long with the first three bytes including a partitioning key, wherein the partitioning key determines the physical partition the stored debit data the at least one consumer key is representative of is located in.

65. A system as claimed in claim 48, wherein the at least one consumer key is identified by at least one of a name and an address.

30 66. A system as claimed in claim 48, wherein the matching module performs a matching process, and further wherein the matching process includes a standardization component, a validation component, and a matching component.

67. A system as claimed in claim 66, wherein the standardization component standardizes the transactional debit data into a consistent format.
- 5 68. A system as claimed in claim 66, wherein the validation component checks the transactional debit data against existing reference files to detect at least one of bad data and incorrect data.
- 10 69. A system as claimed in claim 66, wherein the matching component matches the transactional debit data against the stored debit data to determine one of a first condition and a second condition, wherein the first condition is a match between the transactional debit data and the stored debit data, and further wherein the second condition is no match between the transactional debit data and the stored debit data.
- 15 70. A system as claimed in claim 69, wherein the matching component matches the transactional debit data against the stored debit data to determine one of a first condition and a second condition using at least one matching search, and further wherein the at least one matching search include at least one of a name/address search, a name/previous address search, a name/driver's license number search, a name/phone search, a name/MICR search, a MICR/phone search, and a MICR/address search.
- 20 71. A system as claimed in claim 70, wherein the matching module is configured to generate an order of matching searches performed when at least two matching searches are performed.
- 25 72. A system as claimed in claim 70, wherein the at least one matching search is performed using a fuzzy matching process.
- 30 73. A system as claimed in claim 70, wherein the at least one matching search is performed using a hardkey matching process.

74. A system as claimed in claim 69, wherein the calling application is further configured to receive the at least one consumer key representative of the consumer the stored debit data the transactional debit data was matched to is representative of when the first condition is determined.

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75. A system as claimed in claim 69, wherein the calling application receives the stored debit data the transactional debit data was matched to when the second condition is determined.

10 76. A method of conducting a debit data validation of a consumer involved in a debit transaction, the method comprising:

receiving a request to validate debit data of the consumer involved in a debit transaction;

receiving transactional debit data that is to be validated; and

15 generating a response message to the request to validate debit data of the consumer involved in a debit transaction, wherein the response message is indicative of one of a first condition and a second condition, wherein the first condition is a validation of the debit data, and further wherein the second condition is a lack of validation of the debit data of the consumer.

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